

SEQUENCE LISTING

<110> DeFrenne, Catherine
DelMelle, Christine
Ruelle, Jean-Louis

<120> Novel Compounds

<130> BM45379

<140> 09/936,377

<141>

<150> 9905815.8

<151> 1999-03-12

<150> 9909094.6

<151> 1999-04-21

<150> 9909503.6

<151> 1999-04-23

<150> 9909787.5

<151> 1999-04-28

<150> 9910710.4

<151> 1999-05-07

<150> PCT/EP00/09155

<151> 2000-03-07

<160> 10

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 2277

<212> DNA

<213> Neisseria meningitidis

<400> 1

atggcacaaa	ctacactcaa	acccattggt	ttatcaattc	ttttaatcaa	cacacccctc	60
ctcgcccaag	cgcatgaaac	tgagcaatcg	gtgggcttgg	aaacggttac	cgtcgctcggc	120
aaaagccgtc	cgcgcgccac	atcagggctg	ctgcacactt	cgaccgcctc	cgacaaaatc	180
atcagcggcg	acaccttgcg	acaaaaagcc	gtcaacttgg	gcgatgcttt	ggacggcgctg	240
ccgggcattc	acgcctcgca	atacggcggc	ggcgcgctccg	ctcccgttat	tcgcggtcaa	300
acaggcagac	ggattaaagt	attgaaccat	cacggcgaaa	caggcgatat	ggcggatttt	360
tcgcccgatc	acgccattat	ggtagatacc	gccttgctgc	aacaggtcga	aatcctgcgc	420
gggcccgtta	cgctcttgta	cagctcgggc	aatgtggcgg	ggctggtcga	tgttgccgat	480
ggcaaaatcc	ccgaaaaaat	gcctgaaaaa	ggcgtatcgg	gcgaactcgg	attgctgttg	540
agcagcggca	atctggaaaa	actcacgtcc	ggcgcatca	atatcggttt	gggcaaaaac	600
tttgtattgc	acacggaagg	gctgtaccgc	aaatcggggg	attacgccgt	accgcgttac	660
cgcaatctga	aacgcctgcc	cgacagccca	cgccgattcg	caaacgggca	gcacggtgct	720
gtcttggtgt	ggcgaaaaag	gttttatcgg	cgtacgtaca	gcgaccgtcg	cgaccaatat	780
ggtctgcctg	cccacagcca	cgaatacgat	gattgccacg	ccgacatcat	ctggcaaaaag	840

agcttgatta	acaaacgcta	tttacagctt	tatccgcacc	tgttgaccga	agaagacgtc	900
gattacgaca	atccgggctt	gagctgcggc	ttccacgacg	acgatgatgc	acacgcccac	960
gcccacaacg	gcaaaccctt	gatagacctg	cgcaacaaac	gctacgaact	ccgcgcggaa	1020
tggaagcagc	cattccccgg	ttttgaagcc	ctgcgcgtac	acctgaaccg	caacgactac	1080
caccacgacg	aaaaagcagg	cgatgcagtc	gaaaactttt	ttaacaacca	aacgcaaaac	1140
gcccgcacgc	agttgcgcca	ccaacccata	ggccgtctga	aaggcagctg	gggctgcaa	1200
tatttgggac	aaaaatccag	tgctttatct	gccacatccg	aagcgggtcaa	acaaccgatg	1260
ctgcttgaca	ataaagtgca	acattacagc	tttttcgggtg	tagaacaggc	aaactgggac	1320
aacttcacgc	ttgaaggcgg	cgtacgcgtg	gaaaaacaaa	aagcctccat	ccgctacgac	1380
aaagcattga	ttgatcgggg	aaactactac	aagcagcccc	tgcccgaacct	cggcgcgcac	1440
cgccaaacgc	cccgcctcgtt	cgcactttcg	ggcaactggt	atttcacgcc	gcaacacaaa	1500
ctcagcctga	ccgcctccca	tcaggaacgc	ctgccgtcaa	cgcaagagct	gtacgcacac	1560
ggcaaacacg	ttgccacca	cacttttgaa	gtcgggaaca	aacacctgaa	caaagagcgt	1620
tccaacaaca	tcgaactcgc	gttgggctac	gaaggcgacc	gctggcaata	caatctggca	1680
ctctaccgca	accgcttcgg	caactacatt	tacgcccata	ccttaaacga	cggacgcggc	1740
cccaaatacca	tcgaagacga	cagcgaaatg	aagctcgtgc	gtacaacca	atccggtgcg	1800
gactttctacg	gcgcggaagg	cgaaatctac	ttcaaaccga	caccgcgcta	ccgcatcggc	1860
gtttccggcg	actatgtacg	aggccgtctg	aaaaacctgc	cgtccttacc	cggcagggaa	1920
gatgcctacg	gcaaccgtcc	tttcatcgcg	caggacgacc	aaaacgcccc	tcgcgttccg	1980
gctgcgcgcc	tcgggttcca	cctgaaagcc	tcgctgaccg	accgcacgca	tgccaatttg	2040
gactactacc	gcgtgtttgc	ccaaaacaaa	ctcgcccgtc	acgaaacgcg	cacgcccgga	2100
caccatatgc	tcaacctcgg	cgcaaaactac	cgccgcaata	cgcgctatgg	cgagtggaaat	2160
tggtacgtca	aagccgacaa	cctgctcaac	caatccgttt	acgcccacag	cagcttcctc	2220
tctgatacgc	cacaaatggg	ccgcagcttt	accggtggcg	taaacgtgaa	gttttaa	2277

<210> 2

<211> 758

<212> PRT

<213> Neisseria meningitidis

<400> 2

Met	Ala	Gln	Thr	Thr	Leu	Lys	Pro	Ile	Val	Leu	Ser	Ile	Leu	Leu	Ile
1				5					10					15	
Asn	Thr	Pro	Leu	Leu	Ala	Gln	Ala	His	Glu	Thr	Glu	Gln	Ser	Val	Gly
			20					25					30		
Leu	Glu	Thr	Val	Thr	Val	Val	Gly	Lys	Ser	Arg	Pro	Arg	Ala	Thr	Ser
			35				40					45			
Gly	Leu	Leu	His	Thr	Ser	Thr	Ala	Ser	Asp	Lys	Ile	Ile	Ser	Gly	Asp
	50					55					60				
Thr	Leu	Arg	Gln	Lys	Ala	Val	Asn	Leu	Gly	Asp	Ala	Leu	Asp	Gly	Val
65					70					75					80
Pro	Gly	Ile	His	Ala	Ser	Gln	Tyr	Gly	Gly	Gly	Ala	Ser	Ala	Pro	Val
				85					90					95	
Ile	Arg	Gly	Gln	Thr	Gly	Arg	Arg	Ile	Lys	Val	Leu	Asn	His	His	Gly
			100					105					110		
Glu	Thr	Gly	Asp	Met	Ala	Asp	Phe	Ser	Pro	Asp	His	Ala	Ile	Met	Val
		115					120					125			
Asp	Thr	Ala	Leu	Ser	Gln	Gln	Val	Glu	Ile	Leu	Arg	Gly	Pro	Val	Thr
	130					135					140				
Leu	Leu	Tyr	Ser	Ser	Gly	Asn	Val	Ala	Gly	Leu	Val	Asp	Val	Ala	Asp
145					150					155					160
Gly	Lys	Ile	Pro	Glu	Lys	Met	Pro	Glu	Asn	Gly	Val	Ser	Gly	Glu	Leu
				165					170					175	
Gly	Leu	Arg	Leu	Ser	Ser	Gly	Asn	Leu	Glu	Lys	Leu	Thr	Ser	Gly	Gly
			180				185						190		
Ile	Asn	Ile	Gly	Leu	Gly	Lys	Asn	Phe	Val	Leu	His	Thr	Glu	Gly	Leu
	195						200					205			

Tyr	Arg	Lys	Ser	Gly	Asp	Tyr	Ala	Val	Pro	Arg	Tyr	Arg	Asn	Leu	Lys
210						215					220				
Arg	Leu	Pro	Asp	Ser	Pro	Arg	Arg	Phe	Ala	Asn	Gly	Gln	His	Arg	Ala
225					230					235					240
Val	Leu	Gly	Trp	Arg	Lys	Arg	Phe	Tyr	Arg	Arg	Thr	Tyr	Ser	Asp	Arg
				245					250					255	
Arg	Asp	Gln	Tyr	Gly	Leu	Pro	Ala	His	Ser	His	Glu	Tyr	Asp	Asp	Cys
			260					265					270		
His	Ala	Asp	Ile	Ile	Trp	Gln	Lys	Ser	Leu	Ile	Asn	Lys	Arg	Tyr	Leu
		275					280					285			
Gln	Leu	Tyr	Pro	His	Leu	Leu	Thr	Glu	Glu	Asp	Val	Asp	Tyr	Asp	Asn
	290					295					300				
Pro	Gly	Leu	Ser	Cys	Gly	Phe	His	Asp	Asp	Asp	Asp	Ala	His	Ala	His
305					310					315					320
Ala	His	Asn	Gly	Lys	Pro	Trp	Ile	Asp	Leu	Arg	Asn	Lys	Arg	Tyr	Glu
				325					330					335	
Leu	Arg	Ala	Glu	Trp	Lys	Gln	Pro	Phe	Pro	Gly	Phe	Glu	Ala	Leu	Arg
			340					345					350		
Val	His	Leu	Asn	Arg	Asn	Asp	Tyr	His	His	Asp	Glu	Lys	Ala	Gly	Asp
		355					360					365			
Ala	Val	Glu	Asn	Phe	Phe	Asn	Asn	Gln	Thr	Gln	Asn	Ala	Arg	Ile	Glu
	370					375					380				
Leu	Arg	His	Gln	Pro	Ile	Gly	Arg	Leu	Lys	Gly	Ser	Trp	Gly	Val	Gln
385					390					395					400
Tyr	Leu	Gly	Gln	Lys	Ser	Ser	Ala	Leu	Ser	Ala	Thr	Ser	Glu	Ala	Val
				405					410					415	
Lys	Gln	Pro	Met	Leu	Leu	Asp	Asn	Lys	Val	Gln	His	Tyr	Ser	Phe	Phe
		420						425					430		
Gly	Val	Glu	Gln	Ala	Asn	Trp	Asp	Asn	Phe	Thr	Leu	Glu	Gly	Gly	Val
		435					440					445			
Arg	Val	Glu	Lys	Gln	Lys	Ala	Ser	Ile	Arg	Tyr	Asp	Lys	Ala	Leu	Ile
	450					455					460				
Asp	Arg	Glu	Asn	Tyr	Tyr	Lys	Gln	Pro	Leu	Pro	Asp	Leu	Gly	Ala	His
465				470						475					480
Arg	Gln	Thr	Ala	Arg	Ser	Phe	Ala	Leu	Ser	Gly	Asn	Trp	Tyr	Phe	Thr
			485					490						495	
Pro	Gln	His	Lys	Leu	Ser	Leu	Thr	Ala	Ser	His	Gln	Glu	Arg	Leu	Pro
		500						505					510		
Ser	Thr	Gln	Glu	Leu	Tyr	Ala	His	Gly	Lys	His	Val	Ala	Thr	Asn	Thr
		515					520					525			
Phe	Glu	Val	Gly	Asn	Lys	His	Leu	Asn	Lys	Glu	Arg	Ser	Asn	Asn	Ile
	530					535					540				
Glu	Leu	Ala	Leu	Gly	Tyr	Glu	Gly	Asp	Arg	Trp	Gln	Tyr	Asn	Leu	Ala
545				550						555					560
Leu	Tyr	Arg	Asn	Arg	Phe	Gly	Asn	Tyr	Ile	Tyr	Ala	Gln	Thr	Leu	Asn
			565					570						575	
Asp	Gly	Arg	Gly	Pro	Lys	Ser	Ile	Glu	Asp	Asp	Ser	Glu	Met	Lys	Leu
			580					585					590		
Val	Arg	Tyr	Asn	Gln	Ser	Gly	Ala	Asp	Phe	Tyr	Gly	Ala	Glu	Gly	Glu
		595					600					605			
Ile	Tyr	Phe	Lys	Pro	Thr	Pro	Arg	Tyr	Arg	Ile	Gly	Val	Ser	Gly	Asp
	610					615					620				
Tyr	Val	Arg	Gly	Arg	Leu	Lys	Asn	Leu	Pro	Ser	Leu	Pro	Gly	Arg	Glu
625					630					635					640
Asp	Ala	Tyr	Gly	Asn	Arg	Pro	Phe	Ile	Ala	Gln	Asp	Asp	Gln	Asn	Ala
			645					650						655	
Pro	Arg	Val	Pro	Ala	Ala	Arg	Leu	Gly	Phe	His	Leu	Lys	Ala	Ser	Leu

660	665	670
Thr Asp Arg Ile Asp Ala Asn Leu Asp Tyr Tyr Arg Val Phe Ala Gln		
675	680	685
Asn Lys Leu Ala Arg Tyr Glu Thr Arg Thr Pro Gly His His Met Leu		
690	695	700
Asn Leu Gly Ala Asn Tyr Arg Arg Asn Thr Arg Tyr Gly Glu Trp Asn		
705	710	715
Trp Tyr Val Lys Ala Asp Asn Leu Leu Asn Gln Ser Val Tyr Ala His		
725	730	735
Ser Ser Phe Leu Ser Asp Thr Pro Gln Met Gly Arg Ser Phe Thr Gly		
740	745	750
Gly Val Asn Val Lys Phe		
755		

<210> 3
 <211> 2112
 <212> DNA
 <213> Neisseria meningitidis

<400> 3

atgaaaatat	catttcattt	agctttatta	cccacgctga	ttattgcttc	cttccctggt	60
gctgcgcgcg	atacgcagga	caatggtgaa	cattacaccg	ccacgctacc	taccgttttc	120
gtggtcggac	agtccgacac	cagcgtactc	aaaggctaca	tcaactacga	cgaagccgcc	180
gttaccgcga	acggacagct	catcaaagaa	acgccgcaaa	ccatcgatac	gctcaatatc	240
cagaaaaaca	aaaattacgg	tacgaacgat	ttgagttcca	tcctcgaagg	caatgccggc	300
atcgacgctg	cctacgatat	gcgcggcgaa	agcattttcc	tgcgcggttt	tcaagccgat	360
gcatecgata	tttaccgcga	cggcgtgcgc	gaaagcggac	aagtgcgcgc	cagtactgcc	420
aacatcgagc	gcgtggaaat	cctgaaaggc	ccgtcttcgc	tgctttacgg	ccgcaccaac	480
ggcggcggcg	tcatacaat	ggtcagcaaa	tacgccaaat	tcaaacaaag	ccgcaacatc	540
ggtgcgggtt	acggttcgtg	ggcaaaccgc	agcctgaata	tggaacatta	cgaagtgcgt	600
aacaaaaacg	tcgccatccg	tctcacccgc	gaagtcgggc	gcgccaatc	gttcgcgacg	660
ggcatagaca	gcaaaaatgt	catggtttca	cccagcatta	ccgtcaaact	cgacaacggc	720
ttgaaatgga	cggggcaata	cacctacgac	aatgtggagc	gcacgcccga	ccgcagtcgc	780
accaagtccg	tgtacgaccg	cttcggactg	ccttaccgca	tggggttcgc	ccaccggaac	840
gattttgtca	aagacaagct	gcaagtttgg	cgttcgcgac	ttgaatacgc	cttcaacgac	900
aaatggcgtg	cccaatggca	gctcgccac	cgcacggcgg	cgcaggattt	tgatcatttc	960
tatgcaggca	gcgaaaatgg	caacttaatc	aaacgtaact	acgcctggca	gcagaccgac	1020
aacaaaaccc	tgctgtccaa	cttcacgctc	aacggcgact	acaccatcgg	ccgttttgaa	1080
aaccacctga	ccgtaggcat	ggattacagc	cgcgaacacc	gcaaccgcac	attgggtttc	1140
agacgcaact	ttaccgcctc	catcgatcca	tacgaccgcg	caagcaggcc	ggcttcgggc	1200
agattgcagc	gtattctggc	ccaagaccgg	cacaaagccg	actcctacgg	catcttcgtg	1260
caaaacatct	tctccgccac	gcccgatctg	aaattcgtcc	tcggcggtcg	ttacgacaag	1320
tacaccttta	attccgaaaa	caaactcacc	ggcagcagcc	gccagtacag	cggacactcg	1380
ttcagcccca	acatcgggtg	agtgtggaac	atcaatcccg	tccacacact	ttacgcctcg	1440
tataacaaag	cgttcgcgcc	ttatggcgga	cgcggcggct	atttgagcat	caacacgtcg	1500
tcttcgcgcg	tgttcaacgc	cgaccccgag	tacaccgcgc	aatacgaaac	cggcgtcaaa	1560
agcagttggc	tggacgaccg	cctcagcacc	acattgtccg	cctaccaa	cgaacgcttc	1620
aatatccgct	accgccccga	cgagcaaaat	gatccctaca	cttgggcagt	cggcggtaaa	1680
caccgttcgc	gcggcgtgga	attgtccgcc	atcgggcaaa	tcattcccaa	aaaactctat	1740
ctgcgcgggt	cgttgggcgt	gatgcaggcg	aaagtgcgtt	aagacaaaaa	aaatcccgac	1800
cgagtgggca	tccatttgaa	taataccagc	aacgttaccg	gcaacctgtt	tttcggttat	1860
acaccgaccg	aaaacctcta	cggcgaaatc	ggcgtaaccg	gtacaggcaa	acgctacggt	1920
tacaactcaa	gaaataaaga	agtgactacg	cttcaggct	ttgcccgagt	tgatgccatg	1980
ctcggctgga	accataaaaa	tgttaacggt	acctttgcgc	cagccaatct	gttcaatcaa	2040
aaatatggc	gttcggactc	tatgccgggt	aatccgcgcg	gctatactgc	ccgggtaaat	2100
taccgtttct	ga					2112

<210> 4
 <211> 703
 <212> PRT
 <213> Neisseria meningitidis

<400> 4
 Met Lys Ile Ser Phe His Leu Ala Leu Leu Pro Thr Leu Ile Ile Ala
 1 5 10 15
 Ser Phe Pro Val Ala Ala Ala Asp Thr Gln Asp Asn Gly Glu His Tyr
 20 25 30
 Thr Ala Thr Leu Pro Thr Val Ser Val Val Gly Gln Ser Asp Thr Ser
 35 40 45
 Val Leu Lys Gly Tyr Ile Asn Tyr Asp Glu Ala Ala Val Thr Arg Asn
 50 55 60
 Gly Gln Leu Ile Lys Glu Thr Pro Gln Thr Ile Asp Thr Leu Asn Ile
 65 70 75 80
 Gln Lys Asn Lys Asn Tyr Gly Thr Asn Asp Leu Ser Ser Ile Leu Glu
 85 90 95
 Gly Asn Ala Gly Ile Asp Ala Ala Tyr Asp Met Arg Gly Glu Ser Ile
 100 105 110
 Phe Leu Arg Gly Phe Gln Ala Asp Ala Ser Asp Ile Tyr Arg Asp Gly
 115 120 125
 Val Arg Glu Ser Gly Gln Val Arg Arg Ser Thr Ala Asn Ile Glu Arg
 130 135 140
 Val Glu Ile Leu Lys Gly Pro Ser Ser Val Leu Tyr Gly Arg Thr Asn
 145 150 155 160
 Gly Gly Gly Val Ile Asn Met Val Ser Lys Tyr Ala Asn Phe Lys Gln
 165 170 175
 Ser Arg Asn Ile Gly Ala Val Tyr Gly Ser Trp Ala Asn Arg Ser Leu
 180 185 190
 Asn Met Asp Ile Asn Glu Val Leu Asn Lys Asn Val Ala Ile Arg Leu
 195 200 205
 Thr Gly Glu Val Gly Arg Ala Asn Ser Phe Arg Ser Gly Ile Asp Ser
 210 215 220
 Lys Asn Val Met Val Ser Pro Ser Ile Thr Val Lys Leu Asp Asn Gly
 225 230 235 240
 Leu Lys Trp Thr Gly Gln Tyr Thr Tyr Asp Asn Val Glu Arg Thr Pro
 245 250 255
 Asp Arg Ser Pro Thr Lys Ser Val Tyr Asp Arg Phe Gly Leu Pro Tyr
 260 265 270
 Arg Met Gly Phe Ala His Arg Asn Asp Phe Val Lys Asp Lys Leu Gln
 275 280 285
 Val Trp Arg Ser Asp Leu Glu Tyr Ala Phe Asn Asp Lys Trp Arg Ala
 290 295 300
 Gln Trp Gln Leu Ala His Arg Thr Ala Ala Gln Asp Phe Asp His Phe
 305 310 315 320
 Tyr Ala Gly Ser Glu Asn Gly Asn Leu Ile Lys Arg Asn Tyr Ala Trp
 325 330 335
 Gln Gln Thr Asp Asn Lys Thr Leu Ser Ser Asn Phe Thr Leu Asn Gly
 340 345 350
 Asp Tyr Thr Ile Gly Arg Phe Glu Asn His Leu Thr Val Gly Met Asp
 355 360 365
 Tyr Ser Arg Glu His Arg Asn Pro Thr Leu Gly Phe Arg Arg Asn Phe
 370 375 380
 Thr Ala Ser Ile Asp Pro Tyr Asp Arg Ala Ser Arg Pro Ala Ser Gly
 385 390 395 400
 Arg Leu Gln Arg Ile Leu Ala Gln Asp Arg His Lys Ala Asp Ser Tyr

				405					410					415			
Gly	Ile	Phe	Val	Gln	Asn	Ile	Phe	Ser	Ala	Thr	Pro	Asp	Leu	Lys	Phe		
			420					425					430				
Val	Leu	Gly	Gly	Arg	Tyr	Asp	Lys	Tyr	Thr	Phe	Asn	Ser	Glu	Asn	Lys		
		435					440					445					
Leu	Thr	Gly	Ser	Ser	Arg	Gln	Tyr	Ser	Gly	His	Ser	Phe	Ser	Pro	Asn		
	450					455					460						
Ile	Gly	Ala	Val	Trp	Asn	Ile	Asn	Pro	Val	His	Thr	Leu	Tyr	Ala	Ser		
465					470					475					480		
Tyr	Asn	Lys	Ala	Phe	Ala	Pro	Tyr	Gly	Gly	Arg	Gly	Gly	Tyr	Leu	Ser		
			485					490					495				
Ile	Asn	Thr	Ser	Ser	Ser	Ala	Val	Phe	Asn	Ala	Asp	Pro	Glu	Tyr	Thr		
		500						505				510					
Arg	Gln	Tyr	Glu	Thr	Gly	Val	Lys	Ser	Ser	Trp	Leu	Asp	Asp	Arg	Leu		
	515						520				525						
Ser	Thr	Thr	Leu	Ser	Ala	Tyr	Gln	Ile	Glu	Arg	Phe	Asn	Ile	Arg	Tyr		
	530					535					540						
Arg	Pro	Asp	Glu	Gln	Asn	Asp	Pro	Tyr	Thr	Trp	Ala	Val	Gly	Gly	Lys		
545					550					555					560		
His	Arg	Ser	Arg	Gly	Val	Glu	Leu	Ser	Ala	Ile	Gly	Gln	Ile	Ile	Pro		
			565					570					575				
Lys	Lys	Leu	Tyr	Leu	Arg	Gly	Ser	Leu	Gly	Val	Met	Gln	Ala	Lys	Val		
		580						585				590					
Val	Glu	Asp	Lys	Lys	Asn	Pro	Asp	Arg	Val	Gly	Ile	His	Leu	Asn	Asn		
	595					600						605					
Thr	Ser	Asn	Val	Thr	Gly	Asn	Leu	Phe	Phe	Arg	Tyr	Thr	Pro	Thr	Glu		
	610					615					620						
Asn	Leu	Tyr	Gly	Glu	Ile	Gly	Val	Thr	Gly	Thr	Gly	Lys	Arg	Tyr	Gly		
625					630					635					640		
Tyr	Asn	Ser	Arg	Asn	Lys	Glu	Val	Thr	Thr	Leu	Pro	Gly	Phe	Ala	Arg		
			645					650					655				
Val	Asp	Ala	Met	Leu	Gly	Trp	Asn	His	Lys	Asn	Val	Asn	Val	Thr	Phe		
		660						665				670					
Ala	Ala	Ala	Asn	Leu	Phe	Asn	Gln	Lys	Tyr	Trp	Arg	Ser	Asp	Ser	Met		
		675					680					685					
Pro	Gly	Asn	Pro	Arg	Gly	Tyr	Thr	Ala	Arg	Val	Asn	Tyr	Arg	Phe			
	690					695					700						

<210> 5
 <211> 378
 <212> DNA
 <213> Neisseria meningitidis

<400> 5	
gtgaacaaaa ccctcatcct cgccctttcc gccctcctcg gccttgccgc gtgcagtgcc	60
gaacgcgcct cgctgtaccc ctcatataag ctcaaagtca tacagggcaa cgaaatcgac	120
ccccgcgcgc ccgcccact ccgcctcggt atgaccaaag accaagtcct gctcctgctc	180
ggcagccccc tgttgccgca cgcgttcac accgaacgct gggactatac cttcaacacc	240
tcccgcaacg gcatcatcaa agaacgcagc aatctgaccg tctattttga aaacggcgta	300
ctcgtccgca ccgaaggcga cgtcctgcaa aacgctgccg aagcgtcaa agaccgccag	360
aacacagaca aaccataa	378

<210> 6
 <211> 125
 <212> PRT
 <213> Neisseria meningitidis

<400> 6

```
Met Asn Lys Thr Leu Ile Leu Ala Leu Ser Ala Leu Leu Gly Leu Ala
 1           5           10           15
Ala Cys Ser Ala Glu Arg Ala Ser Leu Tyr Pro Ser Tyr Lys Leu Lys
 20           25           30
Val Ile Gln Gly Asn Glu Ile Asp Pro Arg Ala Ala Ala Leu Arg
 35           40           45
Leu Gly Met Thr Lys Asp Gln Val Leu Leu Leu Leu Gly Ser Pro Leu
 50           55           60
Leu Arg Asp Ala Phe His Thr Glu Arg Trp Asp Tyr Thr Phe Asn Thr
 65           70           75           80
Ser Arg Asn Gly Ile Ile Lys Glu Arg Ser Asn Leu Thr Val Tyr Phe
 85           90           95
Glu Asn Gly Val Leu Val Arg Thr Glu Gly Asp Val Leu Gln Asn Ala
 100          105          110
Ala Glu Ala Leu Lys Asp Arg Gln Asn Thr Asp Lys Pro
 115          120          125
```

<210> 7

<211> 864

<212> DNA

<213> Neisseria meningitidis

<400> 7

```
atgaaaacct tcttcaaaac cctttccgcc gccgcactcg cgctcatcct cgccgcctgc      60
ggcgggtcaaa aagacagcgc gcccgccgca tccgcttctg ccgccgccga caacggcgcg      120
gagaaaaaag aaatcgtctt cggcacgacc gtcggcgact tcggcgatat ggtcaaagaa      180
caaatccaag ccgagctgga gaaaaaaggc tacaccgtca aactgggtcg gtttaccgac      240
tatgtacgcc cgaatctggc attggctgag ggcgagttgg acatcaacgt cttccaacac      300
aaaccctatc ttgacgactt caaaaaagaa cacaatctgg acatcaccga agtcttccaa      360
gtgccgaccg cgcctttggg actgtaccgg ggcaagctga aatcgctgga agaagtcaaa      420
gacggcagca ccgtatccgc gcccaacgac ccgtccaact tcgccgcgt cttggtgatg      480
ctcgacgaac tgggttgat caaactcaaa gacggcatca atccgctgac cgcattccaa      540
gcggacattg ccgaaaacct gaaaaacatc aaaatcgtcg agcttgaagc cgcgcaactg      600
ccgcgtagcc gcgccgacgt ggattttgcc gtcgtcaacg gcaactacgc cataagcagc      660
ggcatgaagc tgaccgaagc cctgttccaa gaaccgagct ttgcctatgt caactgggtc      720
gccgtcaaaa ccgccgacaa agacagccaa tggcttaaag acgtaaccga ggcctataac      780
tccgacgcgt tcaaagccta cgcgcacaaa cgcttcgagg gctacaaatc ccctgccgca      840
tggaatgaag gcgcagctaa ataa                                     864
```

<210> 8

<211> 287

<212> PRT

<213> Neisseria meningitidis

<400> 8

```
Met Lys Thr Phe Phe Lys Thr Leu Ser Ala Ala Ala Leu Ala Leu Ile
 1           5           10           15
Leu Ala Ala Cys Gly Gly Gln Lys Asp Ser Ala Pro Ala Ala Ser Ala
 20           25           30
Ser Ala Ala Asp Asn Gly Ala Glu Lys Lys Glu Ile Val Phe Gly
 35           40           45
Thr Thr Val Gly Asp Phe Gly Asp Met Val Lys Glu Gln Ile Gln Ala
 50           55           60
Glu Leu Glu Lys Lys Gly Tyr Thr Val Lys Leu Val Glu Phe Thr Asp
 65           70           75           80
Tyr Val Arg Pro Asn Leu Ala Leu Ala Glu Gly Glu Leu Asp Ile Asn
```


1				5					10					15		
Cys	Ser	Pro	Glu	Pro	Ala	Ala	Glu	Lys	Thr	Val	Ser	Ala	Ala	Ser	Ala	
			20					25					30			
Ser	Ala	Ala	Thr	Leu	Thr	Val	Pro	Thr	Ala	Arg	Gly	Asp	Ala	Val	Val	
		35					40					45				
Pro	Lys	Asn	Pro	Glu	Arg	Val	Ala	Val	Tyr	Asp	Trp	Ala	Ala	Leu	Asp	
	50					55					60					
Thr	Leu	Thr	Glu	Leu	Gly	Val	Asn	Val	Gly	Ala	Thr	Thr	Ala	Pro	Met	
65					70					75					80	
Arg	Val	Asp	Tyr	Leu	Gln	Pro	Ala	Phe	Asp	Lys	Ala	Ala	Thr	Val	Gly	
				85					90					95		
Thr	Leu	Phe	Glu	Pro	Asp	Tyr	Glu	Ala	Leu	His	Arg	Tyr	Asn	Pro	Gln	
			100					105					110			
Leu	Val	Ile	Thr	Gly	Gly	Pro	Gly	Ala	Glu	Ala	Tyr	Glu	Gln	Leu	Ala	
		115					120					125				
Lys	Asn	Ala	Thr	Thr	Ile	Asp	Leu	Thr	Val	Asp	Asn	Gly	Asn	Ile	Arg	
	130					135					140					
Thr	Ser	Gly	Glu	Lys	Gln	Met	Glu	Thr	Leu	Ala	Arg	Ile	Phe	Gly	Lys	
145					150					155					160	
Glu	Ala	Arg	Ala	Ala	Glu	Leu	Lys	Ala	Gln	Ile	Asp	Ala	Leu	Phe	Ala	
				165					170					175		
Gln	Thr	Arg	Glu	Ala	Ala	Lys	Gly	Lys	Gly	Arg	Gly	Leu	Val	Leu	Ser	
			180					185					190			
Val	Thr	Gly	Asn	Lys	Val	Ser	Ala	Phe	Gly	Thr	Gln	Ser	Arg	Leu	Ala	
		195					200					205				
Ser	Trp	Ile	His	Gly	Asp	Ile	Gly	Leu	Pro	Pro	Val	Asp	Glu	Ser	Leu	
	210				215						220					
Arg	Asn	Glu	Gly	His	Gly	Gln	Pro	Val	Ser	Phe	Glu	Tyr	Ile	Lys	Glu	
225					230					235					240	
Lys	Asn	Pro	Asp	Trp	Ile	Phe	Ile	Ile	Asp	Arg	Thr	Ala	Ala	Ile	Gly	
			245						250					255		
Gln	Glu	Gly	Pro	Ala	Ala	Val	Glu	Val	Leu	Asp	Asn	Ala	Leu	Val	Arg	
			260					265					270			
Gly	Thr	Asn	Ala	Trp	Lys	Arg	Lys	Gln	Ile	Ile	Val	Met	Pro	Ala	Ala	
		275					280					285				
Asn	Tyr	Ile	Val	Ala	Gly	Gly	Ser	Arg	Gln	Leu	Ile	Gln	Ala	Ala	Glu	
	290				295						300					
Gln	Leu	Lys	Ala	Ala	Phe	Glu	Lys	Ala	Glu	Pro	Val	Ala	Ala	Gly	Lys	
305					310					315					320	
Glu																